

Notice of Allowability

Application No.

10/809,373

Examiner

McDieunel Marc

Applicant(s)

WATANABE ET AL.

Art Unit

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6827/2005.
2. ☒ The allowed claim(s) is/are 1-7.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.


THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 4/19/2007.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


THOMAS BLACK
SUPERVISORY PATENT EXAMINER

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with H. J. Staas on Thursday, April 19, 2007.

The application has been amended as follows:

In the abstract replaced the word "means" by -- device -- in lines 9-11 and 13.

In the abstract deleted the phrase "or the like" in line 16.

Allowable Subject Matter

2. Claims 1-7 are allowed.
3. The following is an examiner's statement of reasons for allowance:

The prior art of record fail to teach or fairly suggest with respect to claims 1 and 4, a flexure correction device for correcting deviation in position and/or orientation of a distal end of an arm due to flexure of a robot, comprising: reference flexure amount storage means storing a plurality of reference flexure amounts representing deviations in position and/or orientation of the distal end of the arm, which are measured at a plurality of positions in a robot operating area

under a plurality of load conditions different in weight; with respect to claim 6, a flexure correction method for correcting deviation in position and/or orientation of a distal end of an arm due to flexure of a robot, using an off-line programming apparatus or a robot controller, comprising the steps of: measuring flexure amounts representing deviations in position and/or orientation of the distal end of the arm at a plurality of positions in a robot operating area for each of a plurality of load conditions different in weight and/or position of center of gravity, and storing the measured flexure amounts in storage means as reference flexure amounts; selecting and designating one or more of the plurality of reference flexure amounts stored in the storage means in accordance with weight and/or position of center of gravity of a tool to be used; calculating a flexure amount for each of taught points in a robot operation program based on the designated reference flexure amounts using the off-line programming apparatus or the robot controller; and correcting position/orientation at each of the taught points based on the calculated flexure amount; and with respect to claim 7, a flexure correction method for correcting deviation in position and/or orientation of a distal end of an arm due to flexure of a robot using a robot controller, comprising the steps of: measuring flexure amounts representing deviations in position and/or orientation of the distal end of the arm at a plurality of positions in a robot operating area for each of a plurality of load conditions different in weight and/or position of center of gravity, in combination with the other elements and features of the claimed invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to McDieunel Marc whose telephone number is (571) 272-6964.


The examiner can normally be reached on 6:30-5:00 Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


McDieunel Marc
Examiner
Art Unit 3661

Thursday, April 19, 2007
MM/


THOMAS BLACK
SUPERVISORY PATENT EXAMINER